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TRANSMITTAL FORM

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First Named Inventor	Kang et al.
Art Unit	2673
Examiner Name	J. Piziali
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ENCLOSURES *(Check all that apply)*

- ☐ Fee Transmittal Form
  - ☐ Fee Attached
- ☑ Amendment/Reply
  - ☐ After Final
  - ☐ Affidavits/declaration(s)
- ☐ Extension of Time Request
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- ☐ Information Disclosure Statement
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- ☐ Response to Missing Parts/ Incomplete Application
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SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

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Date	May 19, 2003

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Typed or printed name	Christine A. Wright		
Signature	Christine A Wright	Date	May 19, 2003

#20

PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Kang, et al.
Serial No.: 09/287,776
Filing Date: April 7, 1999
Confirmation No.: 6690

Examiner: J. Piziali
Art Group: 2673
Our File No.: 00100.99.0027
Docket No.: 0100.9900270

Title: **SWITCHABLE VIDEO OVERLAY METHOD AND APPARATUS**

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5-19-03 *Date*

Christine A. Wright

RESPONSE

Dear Sir:

In the Office Action mailed February 27, 2003, the Examiner rejected claims 1-3, 5-10, 12-17 and 19-22 under 35 U.S.C. §102(e) as being anticipated by Ranganathan, U.S. Patent No. 5,764,201. Claims 4, 11 and 18 were rejected under 35 U.S.C. §103(a).

The Applicants respectfully disagree with the Examiner and request that the rejection be withdrawn and the claims be allowed to issue. The Ranganathan reference does not show or suggest the limitations recited in the pending claims.

Paraphrased, claim 1 is directed to a video overlay apparatus comprised of a programmable switching mechanism. The claims expressly recite that the programmable switching mechanism is coupled to the claimed video scaler and programmably switches video data from the video scaler into *one* of two video overlay generators. Each of the claimed video overlay generators are capable of being coupled to display devices. In other words, the programmable switching mechanism claimed in claim 1 can selectively and programmably switch video from the scaler to *one* of two overlay generators. Each of the overlay generators are in turn coupled to corresponding display devices.

Paraphrased, claim 9 recites a programmable switch that is coupled to a video scaler. The programmable switch of claim 9 is claimed to programmably switch video data from the video scaler to *one* of two overlay generators.

Paraphrased, claim 15 is directed to a video overlay method. The method includes selectively switching video data from a common scaler to *one* of two display devices.

After studying the Ranganathan reference, the Applicants ask the Examiner to identify where the reference discloses a programmable switching mechanism as claimed in claims 1, 9 and 15 that programmably switches video data into one of two overlay generators or display devices.

In paragraph 3 of the Office Action, the Examiner asserts that the video scaler claimed in the pending claims corresponds to element 64 in Fig. 8A of the reference. The Examiner contends that the programmable switching mechanism claimed in the pending claims corresponds to element 68 in Fig. 8A. The Examiner contends that the claimed video overlay generators correspond to elements 32 and 42 disclosed in Fig. 8A.

In the Ranganathan reference, element 68 is *not* a programmable switching mechanism. Element 68 is defined to be a "color space mux" the only function of which is to "bypass color-space converter 66 so that...RGB pixels are not converted." See column 9, lines 1-3.

Elements 32 and 42 of Fig. 8A of the reference are not video overlay generators. They are defined in the specification of the reference as "pixel muxes." See column 9, line 5.

An electronic search of the text of U.S. Patent No. 5,764,201 revealed that the only instance where element 68 is described is in column 9, lines 1-3. It is inconceivable that the Examiner reads column 9, lines 1-3 to satisfy the claim limitation that requires a programmable switching mechanism to switch video data into one of first and second video overlay generators.

Moreover, Fig. 8A shows that element 68 cannot selectively switch its output. The single output of element 68 is shown being directed in parallel into two multiplexors, elements 32 and 42. Element 68 of Fig. 8A could not possibly perform the function recited in each of the independent claims.

As for elements 32 and 42, the claim limitations require that they be video overlay generators and that they be coupled to output display devices. Nowhere in the text of the '201 patent is there any teaching or suggestion that multiplexors 32 and 42 perform any function

remotely resembling that of a video overlay generator. It is well known that multiplexors are not overlay generators.

For the reasons set forth above, the Applicants expect that the rejection of claims 1-3, 5-10, 12-17 and 19-22 will be withdrawn and they be allowed to issue.

As for claims 2, 10 and 16 the Examiner contends that the reference discloses the programmable switching mechanism claimed in these claims. The Examiner cites element 67 in Fig. 8A and column 9, lines 37-46.

Column 9, lines 37-46 state that element 67 is mux control logic. The specification states that an 8-bit register is programmable, presumably referring to element 67.

The Applicant concedes that element 67 of Fig. 8A may in fact be programmable and even correspond to a programmable register however, claims 2, 10 and 16 directly depend upon independent claims that are allowable for the reasons set forth above. Inasmuch as these claims add additional limitations to the allowable independent claims, they should also be allowable over the prior art of record.

As for claim 3, the Examiner contends that element 52 of Fig. 8A corresponds to the claimed first display engine; element 53 in Fig. 8A corresponds to the claimed second display engine; element 32 of Fig. 8A corresponds to the claimed first video overlay generator claimed in claim 3 and element 42 of Fig. 8A corresponds to the claimed second video overlay generator.

As set forth above, neither element 32 nor element 42 are overlay generators; they are multiplexors. It is well known to everyone of skill in the art that a multiplexor is not a video overlay generator. The Examiner's reliance upon these two elements as satisfying that claim limitation is misplaced.

With respect to elements 52 and 53, the specification states that element 52 is "icon overlay logic." (See column 9, line 11.) The specification states that element 53 is "HWC logic." (See column 9, line 15.) The Examiner has not shown how an icon overlay logic or "HWC logic" performs the function claimed in claim 3 for the first display engine, which is the generation of video window timing data. Similarly, the Examiner has not shown how element 53 performs the claimed function of generating second video window timing data. Accordingly, the Examiner's reliance upon elements 52 and 53 as ostensibly being video window timing data generators is misplaced.

As for claims 5 and 19, the Examiner asserts that Fig. 8B shows a selectable video clock source operatively coupled to the video scaler. The Applicants respectfully direct the attention of the Examiner to the entire text of claim 5. A search of the text of the '201 patent did not identify where it teaches that the signal VCLK "wherein the video scaler scales input video corresponding to a display engine...in response to a video clock signal output from the selectable video clock source."

It is well established that rejection under 35 U.S.C. §102 requires each and every limitation to be found in a single reference. Where are the limitations of claim 5 located in the '201 patent?

As for claims 6, 12 and 20, the Examiner contends that the reference discloses the claimed programmable switching mechanism yet does not identify any structure in the figures where these limitations are ostensibly found in the reference. Instead, the Examiner refers to column 12, lines 4-12. The passage of column 12 identified by the Examiner discusses a particular technology of display device, not the programming of frame buffer space as recited in claim 6, 12 and 16. Where are the limitations of these claims located in the '201 reference?

As for claims 7, 13 and 21, the Applicants respectfully request the Examiner to identify where these limitations are found. They are not shown in column 4, lines 7-16 which discusses display technology, not the selection of clock signals.

Regarding claims 8, 14 and 22, the Examiner has again failed to identify where these limitations are located in the reference.

Claims 9, 15 and 17 are also allowable for the reasons set forth above and the corresponding apparatus claims.

As for the rejection of claims 4, 11, and 18, the Examiner contends that Blahut et al., U.S. Patent No. 5,570,126 discloses a data unpacker, a keyer and a data packer.

The Examiner's rejection under 35 U.S.C. (a) presumes that the Ranganathan reference teaches other limitations of the independent claims, which it does not. For this reason alone, dependent claims 4, 11 and 18 are allowable. Upon closer inspection however, it becomes apparent that the '201 patent does not disclose any device that performs the function recited in claim 4, namely unpacking graphics data from a display engine, keying the data unpacker to selectively route the data from a data mechanism and a data packer to pack combined video and graphics data from the keyer. Combining the '126 patent with the '201 patent would not render

the apparatus claimed in claims 4, 11 or 18. The Examiner has therefore misread the references and improperly rejected the claims.

As for claim 18, the arguments set forth above with respect to claim 4 and 11 are repeated.

In summary, the '201 patent does not have any capability of directing video overlay signals to one of two destinations. Put simply, element 68 of Fig. 8A is a 2:1 mux, the output of which is directed to 2, 4:1 muxes. The Examiner has misread the reference and the rejections should be withdrawn.

Respectfully submitted,

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Date: May 19, 2003

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